

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of:

Confirmation No.: 4940

Kari PAJUKOSKI

Art Unit: 2611

Application No.: 10/511,759

Examiner: Leon Viet Q. Nguyen

Filed: October 19, 2004

Attorney Dkt. No.: 059864.00981

For: METHOD FOR LIMITING SIGNAL AND TRANSMITTER

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

October 6, 2010

Sir:

Applicant hereby submits this Pre-Appeal Brief Request for Review of the final rejections of claims 1-18, 22-28, 35 and 39-41 in the above identified application. Claims 1-18, 22-28, 35 and 39-41 were finally rejected in the Office Action dated July 6, 2010. Applicant filed a Response to the Office Action on September 10, 2010, and the Office issued an Advisory Action dated October 1, 2010. While withdrawing some objections and rejections, the Advisory Action maintained the final rejections of claims 1-18, 22-28, 35 and 39-41 under 35 U.S.C. § 103. Applicant appeals these rejections and submits this Pre-Appeal Brief Request for Review.

The Office Action: (a) rejected claims 1, 4-6, and 39 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Hiramatsu (U.S. Patent No. 6,701,163) ("Hiramatsu"), in view of Hunton (U.S. Publication No. 2003/0026351) ("Hunton") and Takada (U.S. Publication No. 2002/0196876) ("Takada"); (b) rejected claims 2, 12-14, 18, 22-24, 35, and 40 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Hiramatsu, in view of Chang (U.S. Patent No. 6,628,605) ("Chang") and Takada; and (c) rejected claims 3, 15-17, and 41 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Hiramatsu, in view of Ozluturk et al. (U.S. Publication No. 2005/0213691) ("Ozluturk") and Takada. Applicant submits that there is clear error in all of these rejections due to the fact that the Office Action has failed to establish a prima facie case that independent claims 1-3, 18, 35, and 39-41, upon which claims 4-6, 12-17, and 22-24 are dependent, are obvious, because Hiramatsu, Hunton, Takada, Chang, and Ozluturk,

whether considered individually or in combination, fail to disclose or suggest, at least “determining an error signal using the signal and the limiting signal by changing the limiting signal so as to be of an opposite sign and reducing from the signal,” as recited in independent claim 1, and similarly recited in independent claims 2-3, 18, 35, and 39-41.

Hiramatsu fails to disclose the aforementioned limitation because Hiramatsu fails to disclose or suggest using both an original signal and a limiting signal to determine an error signal. The Office Action interprets each of transmission signals A, B, and C, as a “signal”, and each of the outputs from filters 110 and 111 as a “limiting signal,” and further interprets the calculations performed by envelope calculation section 113 and coefficient calculation section 114 as “determining an error signal using the signal and the limiting signal” (see e.g., Office Action at page 5). However, Hiramatsu fails to disclose or suggest that either envelope calculation section 113, or coefficient calculation section 114, use transmission signals A, B, and C, in their calculation. Instead, Hiramatsu describes that the envelope calculation section 113 calculates an amplitude of a transmission signal that is a square root of a sum of a square of the in-phase component outputted from the filter 110, and the square of an orthogonal component outputted from the filter 111. Hiramatsu further describes that the calculated amplitude is then output to the correction coefficient calculation section 114. Rather than using transmission signals A, B, and C, the correction coefficient calculation section 114 calculates a correction coefficient based on the amplitude of a transmission signal calculated by the envelope calculation section 113 and the permissible amplitude value set previously (see Hiramatsu at col. 5, lines 1-22). Thus, envelope calculation section 113 and coefficient calculation section 114 only use the signals outputted by filters 110 and 111, and fail to use transmission signals A, B, and C, in their calculation. Therefore, Hiramatsu fails to disclose or suggest using both an original signal and a limiting signal to determine an error signal.

Takada fails to disclose changing a sign of a limiting signal and subtracting it from an input signal. Takada discloses that adder 64a reverses the sign of a signal output by one adaptive filter (i.e., adaptive filter 63b), which the Office Action interprets as a “limiting signal,” adds the reversed sign of the signal output by adaptive filter 63b with the signal output by adaptive filter 62a, and then outputs a result of the summation, FMI(t), to subtractor 65a (see Takada at paragraph [0085]). Takada also describes that subtractor 65a subtracts the output signal FMI(t) from an input signal rl(t) (see Takada at paragraph [0088]). Thus, Takada fails to disclose that

the input signal $rl(t)$ is reduced by the reversed sign of the signal output by adaptive filter 63b. Instead, Takada discloses that the input signal $rl(t)$ is reduced by the sum of the reversed sign of the signal output by adaptive filter 63b and the signal output by adaptive filter 62a.

Furthermore, neither Hunton, Chang, nor Ozluturk, cure the deficiencies of Hiramatsu and Takada. This is because Hunton, Chang, and Ozluturk, whether considered individually or in combination, also fail to disclose or suggest, at least, the aforementioned limitation of independent claims 1-3, 18, 35, and 39-41.

In addition, Applicant respectfully submits that it would not have been obvious to one of ordinary skill in the art, at the time of the filing of the present application, to combine Hiramatsu and Takada. Specifically, the Office Action's proposed modification of the base station structure of Hiramatsu, to replace the envelope calculation section 113 and coefficient calculation section 114 components of Hiramatsu with the adaptive filters 62a, 62b, 63a, and 63b, and the adders 64a and 64b, of Takada, would render the base station unable to perform its primary purpose, namely, suppressing a transmission amplitude at the time of a peak without increasing a number of its filter operation circuits (see Hiramatsu at col. 3, lines 43-47). This is because Takada fails to disclose or suggest that the adaptive filters and adders could perform the functionality of calculating a transmission signal amplitude and calculating a correction coefficient performed by the envelope calculation section 113 and the coefficient calculation section 114. As described in Hiramatsu, the calculation of a correction coefficient and the subtraction of a correction value obtained by multiplying a correction coefficient by a filter coefficient from a transmission signal allows the base station to suppress a transmission amplitude (see Hiramatsu at col. 3, lines 48-53). Because the Office Action's rationale for modifying the base station structure of Hiramatsu with components described in Takada fails to address how the modification would allow the base station structure to perform its primary purpose, the Office Action has failed to establish a prima facie case that the claims would have been obvious to one of ordinary skill in the art, at the time the present application was filed.

In response to above arguments, the Advisory Action asserts new positions to support its erroneous rejections. Applicant respectfully submits that these positions suffer from clear error as well. With respect to Hiramatsu, the Advisory Action takes the inconsistent positions that: (1) the signals output from filters 110 and 111, rather than transmission signals A, B, and C, are interpreted as a "signal" as recited in the independent claims; and (2) the signals output from

filters 110 and 111 are generated from transmission signals A, B, and C indirectly, and thus, the transmission signals A, B, and C are analogous to the “signal” of the independent claims (see Advisory Action at page 2). In addition to being inconsistent, neither of these positions are correct. Independent claims 1-3, 18, 35, and 39-41 each recite that a signal is filtered using a pulse shaping filter to generate a limiting signal, and thus, a “signal” refers to a signal before it is filtered. It is not reasonable to interpret the signals output from filters 110 and 111 as the “signal” of the independent claims, because the signals output from filters 110 and 111 are clearly filtered. Furthermore, transmission signals A, B, and C cannot be interpreted as the “signal” of the independent claims because transmission signals A, B, and C are not used by coefficient calculation section 114 to calculate a correction coefficient.

With respect to Takada, the Advisory Action alleged that subtractor 65a produces an error signal $e(t) = r(t) - (-r(t-\tau) + (-rQ(t-\tau)))$, where the equation includes the input signal $r(t)$ and its sign-reversed version $-r(t-\tau)$ (see Advisory Action at page 2). However, the Advisory Action’s position does not rebut Applicant’s argument that the independent claims recite that a signal is reduced by a reversed signal of the limiting signal. In Takada, the input signal $r(t)$ is not reduced by the reversed sign of the signal output by adaptive filter 63b, but instead is reduced by the sum of the reversed sign of the signal output by adaptive filter 63b and the signal output by adaptive filter 62a. Furthermore, the Advisory Action’s interpretation of the independent claims is clearly unreasonable as it effectively eviscerates the claim limitation, as a reduction of any signal could be restated as a reduction of a sum of a first signal and second signal, where the first signal equals a reversed signal of a limiting signal.

Finally, the Advisory Action alleged that the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference, but that the test is what the combined teachings of the reference would have suggested to those of ordinary skill in the art (see Advisory Action at page 2). The Advisory Action’s position ignores established case law which states that if the proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984).

The Office Action also: (a) rejected claims 7-10 and 25-28 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Hiramatsu, Hunton and Takada, in view of McGowan et al.

(U.S. Publication No. 2002/0012403) ("McGowan"); and (b) rejected claim 11 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Hiramatsu, Chang, and Takada, in view of Dartois (U.S. Publication No. 2002/0042253) ("Dartois"). These rejections suffer from clear error as well. Claims 7-10, 11, and 25-28 depend upon independent claims 1, 2, and 35, respectively. As stated above, Hiramatsu, Hunton, Takada, Chang, and Ozluturk, whether considered individually or in combination, do not disclose or suggest all the elements of independent claims 1-2 and 35. McGowan and Dartois, whether considered individually or in combination, also fail to disclose or suggest all the elements of independent claims 1-2 and 35, and thus, do not cure the deficiencies in Hiramatsu, Hunton, Takada, Chang, and Ozluturk. Consequently, the various combination of the cited references fail to disclose or suggest all the elements of claims 7-10, 11, and 25-28.

In view of the above, Applicant respectfully asserts that the final rejections suffer from clear error, and that, therefore, the final rejections are improper and without basis. Reconsideration and withdrawal of the rejections, in view of the clear errors in the Office Action, is respectfully requested. In the event this paper is not being timely filed, the applicant respectfully petitions for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,

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Enclosures: PTO/SB/33 Form
Notice of Appeal